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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/526,971

07/19/2005

Andre Katz

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7952

466 7590 03/19/2007
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EXAMINER

DAVIS, MARY ALICE

ART UNIT

PAPER NUMBER

3748

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/526,971

Applicant(s)

KATZ, ANDRE

Examiner

Mary A. Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 15-30 and 32-34 is/are rejected.
- 7) ☒ Claim(s) 2-14 and 31 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/7/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claims 1-34 are pending in this application. This Office Action is based on the amended claims received on 07 March 2005.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "a connecting member connected rotatably to each of the profiled members along a respective axis of rotation" (claim 1), "angular half-distance" (claim 2), and "the lifetime angle of each chamber relative to the respective profiled members" (claim 23) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

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the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

The claims are objected to because they include reference characters which are not enclosed within parentheses. "P" and "D" in claim 2 should be in parentheses since these are the proximal and distal points of intersection.

Reference characters corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. See MPEP § 608.01(m).

Claims 5 and 14 are objected to because of the following informalities: "a shortened epicycloid" (claim 5, lines 5-6; and claim 14, lines 6-7). In the specification it is described that "shortening" is equivalent to "eccentricity" (Page 21, line 28). If eccentric is equivalent to "shortened", then it is recommended to change "shortened" to - - eccentric - -, because "shortened" appears to be describing the height as opposed to the eccentricity. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 23 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 23 recites the limitation "the lifetime angle of each chamber" is not disclosed in the specification nor shown in the drawings. What is the lifetime angle of each chamber?

Claims 32-34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 32-34 appear to be describing the system shown in Figures 28A-29F. It is not disclosed in the specification or in the drawings where or how fluid enters and exits the system. Where are the inlet and outlet for the interior and exterior profile member sets? Does the outer profile members, either 61 or 82, rotate, or are they fixed? Is the center profile member attached to the drive shaft? Does the system have a flange plate attached to one of the profile members, similar to the single profile member set shown in Figure 15?

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation of "a connecting member connected rotatably to each of the profiled members along a respective axis of rotation". The verbiage of this claim is construed that the connecting member is rotating, but Figures 15 and 16 show the connecting member to be the housing, which does not rotate. Furthermore, in Figure 15, the axis of rotation "O" is shown, which appears to be in the center of the shaft that one of the profile members is attached. There is no connecting member that is "along a respective axis of rotation" that also connects to "each of the profiled members". Only one of the profile members is connected rotatably to a connecting member along their axis of rotation, which by this limitation would mean that the drive shaft is the connecting member. What is the connecting member, the housing or the drive shaft? Does the connecting member rotate, as described in the limitation, or is it stationary like the housing? How does the connecting rotate while being connected to each of the profile members along a respective axis of rotation, is this a gear? If the connecting member is a gear between the two axis, it is not shown nor described in the specification. In the specification, the connecting member is described to be the housing (25), however, the housing does not rotate and the housing is not "along a respective axis of rotation for each of the profiled members". The Examiner is construing the limitation of "a connecting member connected rotatably to each of the

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profiled members along a respective axis of rotation" to be - - a connecting member connected to one profiled member - -.

Claim 2 recites the limitation "the points M" in Page 4, line 3; and "the two arcs" in Page 4, line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 23 recites the limitation "the lifetime angle" in Page 9, line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 30 recites the limitation: "preferably the (m-1) lobed profiled member". Is it or is it not the (m-1) lobed profile member?

Claim 31 recites the limitation "the ports", "on the appearance side", and "on the disappearance side" in Page 11, lines 6 and 8-9. There is insufficient antecedent basis for this limitation in the claim.

Claim 34 recites the limitation of "the two m-lobed profiles are facing towards each other and are radially on either side of the two (m-1) lobed profiles". Claim 34 depends on claim 32 and contradicts the limitation set forth in claim 32 of: "one of the profiled members has two m-lobed profiles, one on a radially inner annular surface and the other on a radially outer annular surface, which have the same pitch circle and each cooperate with an (m-1) – lobed profile, and in that the (m-1) –lobed profiles have the same pitch circle and are held by the other profiled member". The limitations of claim 34 appear to be trying to describe Figures 28A-28F. A different dependent claim, which claim 34 would depend, is required. The different dependent claim from which claim 34 would depend may be: - - Machine according to claim 1, characterized in that one of the profiled members has two (m-1) profiles, one on a radially inner annular surface and

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the other on a radially outer annular surface, which have the same pitch circle and each cooperate with an m-lobed profile, and in that the m-lobed profiles have the same pitch circle and are held by the other profiled members - -. The Examiner will construe that claim 34 is not dependent on Claim 32.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 15, and 17-22 are rejected under 35 U.S.C. 102(b) as being anticipated by TAYLOR ET AL (Great Britain Patent 1,002,642).

Regarding claim 1, TAYLOR ET AL discloses:

- Displacement machine comprising:
- two profiled members (see Figures 1-3), inner and outer respectively, that have an annular inner profile (see Figure 1 (40, 42, 44, 46, 48, 50), see Figure 2 (80, 82, 84, 86, 88, 90), and see Figure 3 (118, 120, 122, 124, 126, 128, 130, 132)) and an annular outer profile respectively (see Figure 1 (10, 12, 14, 16, 22, 24, 26, 28), see Figure 2 (64, 66, 68, 70, 72, 74, 76, 78), and see Figure 3 (92, 94, 96, 98, 100, 106, 108, 110, 112, 114)),
- a connecting member (212) connected rotatably to each of the profiled members along a respective axis of rotation (Page 6, lines 19-40), and in which:

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- one of the profiles is m-lobed (30) and the other is (m-1)-lobed (36), and they are defined around the axis of rotation of their respective profiled member by m (the axis of rotation is 20, 104) and (m-1) (the axis of rotation is 38, 116) respectively, pattern(s) comprising a lobe dome arc and a lobe hollow arc (see Figures 1-3 which show that there are lobe dome and lobe hollow arcs),
- each profile is the envelope of the other during relative rotations of the profiled members around their respective axis of rotation with meshing of their profiles, which define the chamber contours between them, and rolling without sliding between two pitch circles centered on the respective axes of rotation (see Figures 1-3, which show that chambers are defined between the profiles, and Page 1, line 34 – Page 2, line 41, and Page 6, lines 19-40)),
- characterized in that the relative positions of the profiled members for which a point of contact (10, 92) between the profiles is located on the tangent to the two pitch circles at their mutual rolling point (see Figures 1-3 which show that where the pitch circles have a mutual rolling point, a tangent to this point appears to show that the profiles are in contact with one another), the profiled members have at said point of contact equal continuous curvatures in the same direction with said rolling point as their common centre (see Figures 1-3 which show that at the point of contact the profile members have equal continuous curvatures).

Regarding claim 15, TAYLOR ET AL discloses:

- each lobe is symmetrical relative to an axial plane passing through the vertex of the lobe (see Figures 1-3, Page 3, lines 18-26).

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Regarding claim 17, TAYLOR ET AL discloses:

- the connecting member is firmly attached to a housing (see Figure 5 which shows the connecting member attached to a housing), and in that one of the profiled members is at least indirectly rotatably connected to a drive shaft (see Figure 5 that shows a drive shaft with bearings (200) to support the rotation of it, and Page 6, lines 25-40).

Regarding claim 18, TAYLOR ET AL discloses:

- the other profiled member rotates freely around its axis of rotation (Page 3, lines 18-27, and Page 6, lines 25-31).

Regarding claim 19, TAYLOR ET AL discloses:

- the profiles are each progressive along the axis of rotation of their respective profiled member, the points of tangency of the pitch circles being aligned on a straight line parallel to the two axes of rotation (see Figure 5 which shows that the profiles are progressive along the axis of rotation, and that the tangency, as described above, would inherently be a straight line parallel to the two axis of rotation, Page 1, line 34 – Page 2, line 41)).

Regarding claim 20, TAYLOR ET AL discloses:

- the profiles are progressive by angular displacement of a constant profile around the axis of rotation (Page 1, lines 6-22, and Page 1, line 34-Page 2, line 41).

Regarding claim 21, TAYLOR ET AL discloses:

- the profiles progress into a constant pitch helix (see Figure 5, which shows that wraps of the helix appear to be constant. Since a single figure appears to show

the necessary dimensional relationship for the helical wraps, it is deemed inherent, absent evidence to the contrary, that the helix has a constant pitch.).

Regarding claim 22, TAYLOR ET AL discloses:

- the profiles are constant along their respective axis of rotation, have a constant degree of angular displacement, finite or infinite, along their respective axis of rotation, in that the profiled members can be moved axially relative to each other (see Figure 5, and Page 1, line 24 – Page 2, line 41), and in that the machine comprises at each end a flange (200, 204) complementary to one of the profiles respectively and resting tightly against an end surface of the profiled member holding the other profile (see Figure 5 which shows that the flange of 200 rests against the end surface of the profile member while holding the other profile via 212).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over TAYLOR ET AL in view of MORITA (U.S. Patent 5,114,325).

TAYLOR ET AL discloses the claimed invention, however, fails to disclose a dissymmetrical lobe. MORITA discloses each lobe is dissymmetrical relative to an axial plane passing through the vertex of the lobe (see Figure 2).

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It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have dissymmetrical lobes in TAYLOR ET AL machine, in light of the teachings of MORITA, in order to have smooth low vibration operation of the machine (Column 1, lines 61-64).

Claims 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over TAYLOR ET AL in view of BUCHMULLER ET AL (U.S. Patent 5,674,060).

TAYLOR ET AL discloses the claimed invention as discussed above in claim 1, however, fails to disclose two flanges closing the chambers at the axial ends of the profiled members.

Regarding claim 24, BUCHMUELL ET AL teaches:

- the profiled members are mounted between two flanges (35) closing the chambers at their axial ends (see Figure 1), and in that the machine comprises pressing means to press the flanges axially against the profiled members (see Abstract).

Regarding claim 25, BUCHMUELL ET AL teaches:

- each flange (35) is rotatably firmly attached to one of the profiled members (see Figure 1 which shows that the flanges are attached by (25) to the profile member (12). Furthermore, the flanges rotate since they are attached to the drive shaft (19) that rotates and is attached to the interior member (Column 5, lines 9-13).

It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have flanges closing the chambers at the axial ends of the

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profile members of TAYLOR ET AL, in light of the teachings of BUCHMULLER ET AL, in order to seal the profile members (Column 1, lines 11-25).

Claims 24 and 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over TAYLOR ET AL in view of BRUNDAGE (U.S. Patent 3,695,791).

TAYLOR ET AL discloses the claimed invention as discussed above in claim 1, however, fails to disclose two flanges closing the chambers at the axial ends of the profiled members.

Regarding claim 24, BRUNDAGE teaches:

- the profiled members are mounted between two flanges (52,54) closing the chambers at their axial ends (see Figure 1), and in that the machine comprises pressing means to press the flanges axially against the profiled members (see Abstract).

Regarding claim 26, BRUNDAGE teaches:

- the pressing means are means of subjecting at least part of the outer surface of a first of the flanges to the high pressure of the working fluid to push the first flange against the profiled members and thus push the profiled members against the second flange (Column 6, lines 56-23 describes plate (52) being pushed by the high pressure working fluid against the profiled members. It is inherent that when the flange pushes against the profile members, the profile members would then push against the second flange).

Regarding claim 27, BRUNDAGE teaches:

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- the machine comprises means of distribution that comprise at least one port (58) formed in the first flange (see Figure 1, Column 5, lines 40-41) for the high-pressure working fluid (58 is aligned with the manifold port (44) which is the high pressure port).

Regarding claim 29, BRUNDAGE teaches:

- the ports are rotatably connected to the profiled outer member (see Figures 2 and 10 which shows that the ports are in connection with the outer member when the outer member rotates).

Regarding claim 30, BRUNDAGE teaches:

- ports rotatably connected to one of the profiled members, preferably the (m-1)-lobed profiled member (the ports are connected to the profile members when they rotate, see Figure 8), and that are selectively revealed and hidden by the other profiled member (see Figure 8, it is inherent that the ports will be revealed and hidden by the other profile member).

It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have flanges closing the chambers at the axial ends of the profile members of TAYLOR ET AL, in light of the teachings of BRUNDAGE, in order to seal the profile members against the flanges (see Abstract).

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over modified machine of TAYLOR ET AL as applied to claim 26 above, and further in view of legal precedent.

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The modified machine of TAYLOR ET AL discloses the claimed invention except for at least one port formed in the second flange for the low-pressure fluid. Applicant does not disclose the criticality of having the high pressure port on one side and the low pressure port on the other side. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have put the low pressure port on the second flange, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

Claims 1 and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over GRAY (U.S. Patent 3,884,600) in view of BONAVERA (U.S. Patent 3,117,561) and in view of WANKEL (U.S. Patent 2,988,008).

GRAY discloses a connecting profile member (26, 24) connected rotatably to each of the profiled members along a respective axis of rotation (22), and one of the profiled members (36) has two m-lobed profiles (see Figures 1-4), one on a radially inner annular surface and the other on a radially outer annular surface (see Figures 1-4). However, GRAY does not disclose the profiles of the members being developed by the pitch circles.

BONAVERA teaches the following (m-1)-lobed profile inside an m-lobed profile having the following limitations:

- Displacement machine comprising:
- two profiled members (66, 71), inner and outer respectively, that have an annular inner profile (74,67) and an annular outer profile respectively (70,73),

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- one of the profiles is m -lobed (70,73) and the other is $(m-1)$ -lobed (66,71), and they are defined around the axis of rotation of their respective profiled member by m and $(m-1)$ (see Figures 18-20) respectively, pattern(s) comprising a lobe dome arc and a lobe hollow arc (see Figures 18-20 which shows a lobe dome arc and a lobe hollow arc),
- each profile is the envelope of the other during relative rotations of the profiled members around their respective axis of rotation with meshing of their profiles, which define the chamber contours between them, and rolling without sliding between two pitch circles centered on the respective axes of rotation (see Figure 18 which shows the two pitched circles which are centered on the axes of rotation (75, 76)),
- characterized in that the relative positions of the profiled members for which a point of contact between the profiles is located on the tangent to the two pitch circles at their mutual rolling point (see Figure 18 which shows the mutual rolling point between the two pitch circles. A tangent to this point appears to intersect at a position in which there is contact between the two profiles), the profiled members have at said point of contact equal continuous curvatures in the same direction with said rolling point as their common centre (see Figure 18 which shows that the point of contact is equal continuous curves in the same direction).

WANKEL teaches the development of the m -lobed profile inside a $(m-1)$ lobe profile having the following limitations:

- Displacement machine comprising:

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- two profiled members (see Figures 2-3), inner and outer respectively, that have an annular inner profile (3) and an annular outer profile respectively (1),
- one of the profiles is m-lobed (1) and the other is (m-1)-lobed (3), and they are defined around the axis of rotation of their respective profiled member by m and (m-1) (see Figure 1 which shows that the profiles are defined around the axis of rotations K' and R') respectively, pattern(s) comprising a lobe dome arc and a lobe hollow arc (see Figures 1-3 which show that there are lobe dome and lobe hollow arcs),
- each profile is the envelope of the other during relative rotations of the profiled members around their respective axis of rotation with meshing of their profiles, which define the chamber contours between them, and rolling without sliding between two pitch circles centered on the respective axes of rotation (see Figures 1-3, which show that chambers are defined between the profiles, and Column 1, line 63 – Column 2, line 43),
- characterized in that the relative positions of the profiled members for which a point of contact (D1, D2, D3) between the profiles is located on the tangent to the two pitch circles at their mutual rolling point (see Figure 1 which show that where the pitch circles have a mutual rolling point, a tangent to this point appears to contact at D2, D3), the profiled members have at said point of contact equal continuous curvatures in the same direction with said rolling point as their common centre (see Figures 1-3 which show that at the point of contact the profile members have equal continuous curvatures).

It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have modified the members disclosed by GRAY to have been developed by the pitch circles, in light of the teachings of BONAVERA and WANKEL, in order to maintain permanently effective sealing contact between the members during the movement (Column 1, lines 20-24 of WANKEL).

Claims 1 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over BRODOV ET AL (Russian Patent Publication Number RU2140018) in view of WANKEL in view of BONAVERA.

BRODOV ET AL discloses that two m-lobed profiles (1, 27) are facing towards each other and are radially on either side of the two (m-1)-lobed profiles (30) (see Figure 2). However, BRODOV ET AL fails to disclose that the profile members are developed by the pitch circles. BONAVERA teaches the following (m-1)-lobed profile inside an m-lobed profile (as discussed above), as well as, a connecting member (80) connected rotatably to each of the profiled members along a respective axis of rotation (see Figure 22). WANKEL teaches the development of the m-lobed profile inside a (m-1) lobe profile (as discussed above).

It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have modified the profile members disclosed by BRODOV ET AL to have been developed by the pitch circles, in light of the teachings of BONAVERA and WANKEL, in order to maintain permanently effective sealing contact between the profile members during the movement (Column 1, lines 20-24 of WANKEL).

Allowable Subject Matter

Claims 2-14 and 31 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Prior Art

The IDS (PTO-1449) filled on 7 June 2005 has been considered. An initialized copy is attached hereto.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary A. Davis whose telephone number is (571) 272-9965. The examiner can normally be reached on Monday thru Friday; (Second Friday off) 7am - 3pm.

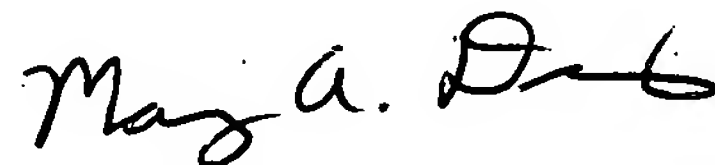
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MAD

3/14/07



Mary A. Davis

Patent Examiner

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THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700